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Occupational Employment and Wages in Erie – May 2016

Workers in the Erie Metropolitan Statistical Area had an average (mean) hourly wage of \$19.14 in May 2016, 20 percent below the nationwide average of \$23.86, according to the U.S. Bureau of Labor Statistics. Sheila Watkins, the Bureau's regional commissioner, noted that, after testing for statistical significance, wages in the local area were significantly lower than their respective national averages in 19 of the 22 major occupational groups, including arts, design, entertainment, sports, and media; computer and mathematical; and legal.

When compared to the nationwide distribution, Erie employment shares were significantly higher in 6 of the 22 occupational groups including production and personal care and service. Conversely, 11 groups had employment shares significantly below their national representation; these groups included management; business and financial operations; and computer and mathematical. (See [table A](#) and box note at end of release.)

Table A. Occupational employment and wages by major occupational group, United States and Erie Metropolitan Statistical Area, and measures of statistical significance, May 2016

| Major occupational group | Percent of total employment | | | Mean hourly wage | | | |
|---|-----------------------------|-------|---|------------------|---------|---|---------------------------|
| | United States | Erie | | United States | Erie | | Percent difference (1) |
| Total, all occupations | 100.0 | 100.0 | | \$23.86 | \$19.14 | * | -20 |
| Management | 5.1 | 3.2 | * | 56.74 | 49.93 | * | -12 |
| Business and financial operations | 5.2 | 3.3 | * | 36.09 | 28.67 | * | -21 |
| Computer and mathematical | 3.0 | 1.2 | * | 42.25 | 32.05 | * | -24 |
| Architecture and engineering | 1.8 | 1.3 | * | 40.53 | 31.92 | * | -21 |
| Life, physical, and social science | 0.8 | 0.3 | * | 35.06 | 34.80 | | -1 |
| Community and social service..... | 1.4 | 2.2 | * | 22.69 | 19.09 | * | -16 |
| Legal..... | 0.8 | 0.3 | * | 50.95 | 39.07 | * | -23 |
| Education, training, and library..... | 6.2 | 6.7 | | 26.21 | 22.87 | * | -13 |
| Arts, design, entertainment, sports, and media..... | 1.4 | 1.0 | * | 28.07 | 19.32 | * | -31 |
| Healthcare practitioners and technical . | 5.9 | 6.8 | * | 38.06 | 34.01 | * | -11 |
| Healthcare support | 2.9 | 3.6 | * | 14.65 | 13.23 | * | -10 |
| Protective service | 2.4 | 2.1 | | 22.03 | 21.89 | | -1 |
| Food preparation and serving related .. | 9.2 | 10.5 | * | 11.47 | 9.82 | * | -14 |
| Building and grounds cleaning and maintenance..... | 3.2 | 3.2 | | 13.47 | 11.11 | * | -18 |
| Personal care and service..... | 3.2 | 5.4 | * | 12.74 | 11.37 | * | -11 |
| Sales and related | 10.4 | 10.0 | | 19.50 | 16.05 | * | -18 |
| Office and administrative support..... | 15.7 | 15.3 | | 17.91 | 15.86 | * | -11 |
| Farming, fishing, and forestry..... | 0.3 | 0.0 | * | 13.37 | 15.77 | | 18 |

Note: See footnotes at end of table.

Table A. Occupational employment and wages by major occupational group, United States and Erie Metropolitan Statistical Area, and measures of statistical significance, May 2016 - Continued

| Major occupational group | Percent of total employment | | | Mean hourly wage | | | |
|---|-----------------------------|------|---|------------------|-------|---|---------------------------|
| | United States | Erie | | United States | Erie | | Percent difference (1) |
| Construction and extraction..... | 4.0 | 2.9 | * | 23.51 | 21.48 | * | -9 |
| Installation, maintenance, and repair ... | 3.9 | 3.5 | * | 22.45 | 19.10 | * | -15 |
| Production | 6.5 | 11.8 | * | 17.88 | 17.03 | * | -5 |
| Transportation and material moving | 6.9 | 5.3 | * | 17.34 | 15.14 | * | -13 |

Footnotes:

(1) A positive percent difference measures how much the mean wage in the Erie Metropolitan Statistical Area is above the national mean wage, while a negative difference reflects a lower wage.

* The percent share of employment or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Erie had 16,530 jobs in production, accounting for 13.0 percent of local area employment, significantly above the 6.6-percent share nationally. The average hourly wage for this occupational group locally was \$16.88, which was lower than the national average of \$17.41.

One occupational group—production—was chosen to illustrate the diversity of data available for any of the 22 major occupational categories. Erie had 14,920 jobs in production, accounting for 11.8 percent of local area employment, significantly above the 6.5-percent share nationally. The average hourly wage for this occupational group locally was \$17.03, significantly lower than the national average of \$17.88.

Some of the larger detailed occupations within the production group included team assemblers (1,110) and first-line supervisors of production and operating workers (1,090). Among the higher-paying jobs were first-line supervisors of production and operating workers (\$25.94) and tool and die makers (\$23.59). At the lower end of the wage scale were laundry and dry-cleaning workers and production worker helpers, with mean hourly wages of \$10.51 and \$11.64, respectively. (Detailed occupational data for the production group are presented in [table 1](#); for a complete listing of detailed occupations go to www.bls.gov/oes/current/oes_21500.htm.)

Location quotients allow us to explore the occupational make-up of a metropolitan area by comparing the composition of jobs in an area relative to the national average. (See [table 1](#).) For example, a location quotient of 2.0 indicates that an occupation accounts for twice the share of employment in the area than it does nationally. In the Erie area, above-average concentrations of employment were found in several of the occupations within the production group. For instance, metal and plastic extruding and drawing machine setters, operators, and tenders were employed at 5.6 times the national rate in Erie, and metal and plastic computer-controlled machine tool operators at 5.2 times the U.S. average. On the other hand, printing press operators had a location quotient of 1.1 in Erie, meaning that this particular occupation's local and national employment shares were similar.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case, the Pennsylvania Department of Labor and Industry.

Note on Occupational Employment Statistics Data

A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. The OES program produces employment and wage estimates for over 800 occupations for all industries combined in the nation; the 50 states and the District of Columbia; 432 metropolitan areas and divisions; 167 nonmetropolitan areas; and Guam, Puerto Rico, and the U.S. Virgin Islands. National estimates are also available by industry for NAICS sectors, 3-, 4-, and selected 5- and 6-digit industries, and by ownership across all industries and for schools and hospitals. OES data are available at www.bls.gov/oes/tables.htm.

OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 sampled establishments in May and November each year. The May 2016 estimates are based on responses from six semiannual panels collected over a 3-year period: May 2016, November 2015, May 2015, November 2014, May 2014, and November 2013. The overall national response rate for the six panels, based on the 50 states and the District of Columbia, is 73 percent based on establishments and 69 percent based on weighted sampled employment. The unweighted employment of sampled establishments across all six semiannual panels represents approximately 58 percent of total national employment. The sample in the Erie, Pa. Metropolitan Statistical Area included 1,611 establishments with a response rate of 76 percent. For more information about OES concepts and methodology, go to www.bls.gov/news.release/ocwage.tn.htm.

The May 2016 OES estimates are based on the 2010 Standard Occupational Classification (SOC) system and the 2012 North American Industry Classification System (NAICS). Information about the 2010 SOC is available on the BLS website at www.bls.gov/soc and information about the 2012 NAICS is available at www.bls.gov/bls/naics.htm.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget.

The **Erie, Pa. Metropolitan Statistical Area** includes Erie County in Pennsylvania.

Additional information

OES data are available on our regional web page at www.bls.gov/regions/mid-atlantic. Answers to frequently asked questions about the OES data are available at www.bls.gov/oes/oes_ques.htm. Detailed technical information about the OES survey is available in our Survey Methods and Reliability Statement on the BLS website at www.bls.gov/oes/current/methods_statement.pdf.

Information in this release will be made available to sensory impaired individuals upon request – Voice phone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Erie Metropolitan Statistical Area, May 2016

| Occupation ⁽¹⁾ | Employment ⁽²⁾ | | Mean wage | |
|---|---------------------------|----------------------------------|-----------|-----------------------|
| | Level | Location quotient ⁽³⁾ | Hourly | Annual ⁽⁴⁾ |
| Production occupations | 14,920 | 1.8 | \$17.03 | \$35,410 |
| First-line supervisors of production and operating workers | 1,090 | 2.0 | 25.94 | 53,940 |
| Electrical and electronic equipment assemblers ... | 380 | 1.9 | 13.30 | 27,660 |
| Engine and other machine assemblers | (5) | (5) | 19.68 | 40,930 |
| Structural metal fabricators and fitters..... | 80 | 1.2 | 18.21 | 37,870 |
| Team assemblers | 1,110 | 1.1 | 13.99 | 29,100 |
| Assemblers and fabricators, all other | 100 | 0.5 | 12.98 | 26,990 |
| Bakers | 190 | 1.2 | 11.71 | 24,350 |
| Butchers and meat cutters | (5) | (5) | 17.65 | 36,710 |
| Food batchmakers..... | 310 | 2.3 | 13.17 | 27,390 |
| Computer-controlled machine tool operators, metal and plastic | 680 | 5.2 | 16.12 | 33,540 |
| Computer numerically controlled machine tool programmers, metal and plastic | 120 | 5.5 | 18.70 | 38,900 |
| Extruding and drawing machine setters, operators, and tenders, metal and plastic | 360 | 5.6 | 13.71 | 28,520 |
| Forging machine setters, operators, and tenders, metal and plastic | 30 | 1.9 | 19.91 | 41,410 |
| Rolling machine setters, operators, and tenders, metal and plastic | 40 | 1.6 | 17.22 | 35,820 |
| Cutting, punching, and press machine setters, operators, and tenders, metal and plastic | 430 | 2.5 | 15.65 | 32,560 |
| Drilling and boring machine tool setters, operators, and tenders, metal and plastic | 40 | 3.4 | 18.14 | 37,730 |
| Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic | 220 | 3.3 | 17.16 | 35,700 |
| Lathe and turning machine tool setters, operators, and tenders, metal and plastic | 130 | 4.3 | 18.65 | 38,790 |
| Milling and planing machine setters, operators, and tenders, metal and plastic | 40 | 2.8 | 21.15 | 44,000 |
| Machinists | 680 | 2.0 | 19.40 | 40,360 |
| Foundry mold and coremakers..... | 70 | 6.0 | 16.83 | 35,000 |
| Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic .. | 400 | 3.1 | 15.15 | 31,510 |
| Multiple machine tool setters, operators, and tenders, metal and plastic | 410 | 3.9 | 16.32 | 33,940 |
| Tool and die makers | 250 | 3.8 | 23.59 | 49,070 |
| Welders, cutters, solderers, and brazers..... | 540 | 1.6 | 17.31 | 36,010 |
| Welding, soldering, and brazing machine setters, operators, and tenders | (5) | (5) | 16.42 | 34,160 |
| Plating and coating machine setters, operators, and tenders, metal and plastic | 50 | 1.7 | 17.94 | 37,320 |
| Printing press operators | 170 | 1.1 | 15.78 | 32,820 |
| Print binding and finishing workers..... | (5) | (5) | 13.94 | 29,000 |
| Laundry and dry-cleaning workers | 180 | 0.9 | 10.51 | 21,850 |
| Sewing machine operators..... | 40 | 0.3 | 13.38 | 27,820 |
| Sawing machine setters, operators, and tenders, wood | 40 | 1.0 | 13.04 | 27,120 |
| Woodworking machine setters, operators, and tenders, except sawing..... | 60 | 0.9 | 15.98 | 33,250 |
| Stationary engineers and boiler operators | (5) | (5) | 29.53 | 61,420 |
| Water and wastewater treatment plant and system operators | 70 | 0.7 | 23.29 | 48,450 |
| Chemical equipment operators and tenders | 120 | 1.8 | 20.40 | 42,430 |
| Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders..... | 50 | 1.2 | (5) | (5) |
| Grinding and polishing workers, hand | 30 | 1.3 | 12.28 | 25,540 |

Note: See footnotes at end of table.

Table 1. Employment and wage data from the Occupational Employment Statistics survey, by occupation, Erie Metropolitan Statistical Area, May 2016 - Continued

| Occupation ⁽¹⁾ | Employment ⁽²⁾ | | Mean wage | |
|---|---------------------------|----------------------------------|-----------|-----------------------|
| | Level | Location quotient ⁽³⁾ | Hourly | Annual ⁽⁴⁾ |
| Mixing and blending machine setters, operators, and tenders | 140 | 1.2 | 18.74 | 38,980 |
| Cutting and slicing machine setters, operators, and tenders | (5) | (5) | 16.51 | 34,330 |
| Extruding, forming, pressing, and compacting machine setters, operators, and tenders..... | (5) | (5) | 12.83 | 26,690 |
| Inspectors, testers, sorters, samplers, and weighers | 730 | 1.6 | 16.88 | 35,100 |
| Dental laboratory technicians | 30 | 1.0 | 18.25 | 37,970 |
| Ophthalmic laboratory technicians | (5) | (5) | 14.85 | 30,880 |
| Packaging and filling machine operators and tenders | 390 | 1.1 | 13.83 | 28,770 |
| Coating, painting, and spraying machine setters, operators, and tenders | 250 | 3.3 | 15.78 | 32,820 |
| Cleaning, washing, and metal pickling equipment operators and tenders | 40 | 2.5 | 16.85 | 35,050 |
| Helpers--production workers | 550 | 1.4 | 11.64 | 24,200 |
| Production workers, all other | 140 | 0.6 | 17.24 | 35,860 |

Footnotes:

(1) For a complete listing of all detailed occupations in the Erie Metropolitan Statistical Area, see www.bls.gov/oes/current/oes_21500.htm.

(2) Estimates for detailed occupations do not sum to the totals because the totals include occupations not shown separately. Estimates do not include self-employed workers.

(3) The location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

(4) Annual wages have been calculated by multiplying the hourly mean wage by a "year-round, full-time" hours figure of 2,080 hours; for those occupations where there is not an hourly mean wage published, the annual wage has been directly calculated from the reported survey data.

(5) Estimates not released.